Appln. No. PCT/CA03/00309
Prelim. Amdt. dated May 4, 2005

Page 2 of 8

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>**Listing of Claims**</u>

1.   (cancelled)

2.   (cancelled)

3.   (cancelled)

4.   (cancelled)

5.   (cancelled)

6.   (cancelled)

7.   (cancelled)

8.   (cancelled)

9.   (cancelled)

10.   (cancelled)

11.   (cancelled)

12.   (cancelled)

13.   (cancelled)

14.   (cancelled)

15.   (cancelled)

16.   (cancelled)

17.   (cancelled)

18.   (cancelled)

19.   (cancelled)

20.   (cancelled)

21.   (cancelled)

22.   (cancelled)

23.   (cancelled)

24.   (cancelled)

25.   (cancelled)

26.   (cancelled)

27.   (original)   A method for switching a mobile device to a deep sleep mode comprising:

        a)   monitoring a system channel;

        b)   counting a number of times the system channel is lost within a timeout period;
and,

        c)   entering the deep sleep mode when the system channel count equals a
predetermined number.

28.   (original)   The method of claim 27, wherein the step of monitoring includes
monitoring one of a pilot channel and a paging channel of the system channel.

29.   (original)   The method of claim 27, wherein the step of monitoring includes resetting
a channel lost counter and a channel lost start time value.

30.   (original)   The method of claim 29, wherein the step of counting includes
incrementing the channel lost counter each time the system channel is lost.

31.   (original)   The method of claim 30, wherein the step of incrementing includes setting
the channel lost start time value to a first current Global Positioning System time when the
channel lost counter value is one.

32.   (original)   The method of claim 31, wherein the step of incrementing includes setting
a channel lost end time value to a second current Global Positioning System time when the
channel lost counter value has reached the predetermined number.

33.   (original)   The method of claim 32, wherein the mobile device enters the deep sleep
mode when the difference between the channel lost end time value and the channel lost start
time value is at least the timeout period.

Appln. No. PCT/CA03/00309
Prelim. Amdt. dated May 4, 2005

Page 4 of 8

34.   (original)   The method of claim 33, wherein the step of entering includes resetting the channel lost counter and the channel lost start time value after the mobile device enters the deep sleep mode.

35.   (original)   A method for saving battery power in a mobile device switched to a deep sleep mode, the method comprising:

    a)   monitoring a system channel;

    b)   counting a number of times the system channel is lost within a timeout period;

    c)   entering the deep sleep mode when the system channel count equals a predetermined number;

    d)   waking up from the deep sleep mode after a time interval to sample an RF strength of a system;

    e)   comparing the sampled RF condition strength to a predetermined level;

    f)   increasing the time interval if the sampled RF condition strength is less than the predetermined level; and,

    g)   re-entering the deep sleep mode.

36.   (original)   The method of claim 35, wherein the step of re-entering the deep sleep mode includes switching the mobile device to one of a first, second and third level deep sleep modes.

37.   (original)   The method of claim 36, wherein the step of switching includes setting a maximum loop counter value to a predetermined counter value associated with one of the first, second and third level deep sleep modes.

38.   (original)   The method of claim 37, wherein the step of switching includes setting the time interval to a predetermined time value associated with one of the first, second and third level deep sleep modes.

39.   (original)   The method of claim 38, wherein the predetermined time value associated with the second level deep sleep mode is greater than the predetermined time value associated with the first level deep sleep mode.

Appln. No. PCT/CA03/00309
Prelim. Amdt. dated May 4, 2005

Page 5 of 8

40.   (original)   The method of claim 39, wherein the predetermined time value associated with the third level deep sleep mode is greater than the predetermined time value associated with the second level deep sleep mode.

41.   (original)   The method of claim 36, wherein the step of waking includes determining a system for acquisition from a list of systems associated with one of the first, second and third level deep sleep modes.

42.   (original)   The method of claim 41, wherein the list of systems includes a first system list, a second system list and a third system list associated with the first, second and third level sleep modes respectively.

43.   (original)   The method of claim 42, wherein the first system list is a subset of the second system list and the third system list, and the second system list is a subset of the third system list.

44.   (original)   The method of claim 35, wherein the step of comparing includes comparing the signal to noise ratio of the RF condition to a predetermined value.

45.   (original)   The method of claim 37, wherein the step of comparing includes setting a mobility flag to true if a Pseudo Noise of the system is unknown.

46.   (original)   The method of claim 37, wherein the step of comparing includes setting a mobility flag to true or if the mobile device is moving.

47.   (original)   The method of claim 45, wherein a phase of the Pseudo Noise is monitored for determining mobility of the mobile device.

48.   (original)   The method of claim 45, wherein the mobile device returns to one of an idle state and the first level deep sleep mode when the mobility flag is true.

49.   (original)   The method of claim 48, wherein the step of comparing includes
        (i)   incrementing a loop counter when the mobility flag is false;
        (ii)   comparing the loop counter value to the maximum loop counter value; and,

Appln. No. PCT/CA03/00309
Prelim. Amdt. dated May 4, 2005

Page 6 of 8

(iii)   switching the mobile device to one of the second and third level deep sleep modes when the loop counter value equals the maximum loop counter value.

50.   (original)   The method of claim 49, wherein step (iii) includes switching the mobile device to the second level deep sleep mode when the mobile device is in the first level deep sleep mode.

51.   (original)   The method of claim 49, wherein step (iii) includes switching the mobile device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode.

52.   (original)   The method of claim 36, wherein the step of switching includes setting a maximum timeout period to a predetermined timeout value associated with one of the first, second and third level deep sleep modes.

53.   (original)   The method of claim 52, wherein the step of comparing includes switching the mobile device to one of the second and third level deep sleep modes when the maximum timeout period expires.

54.   (original)   The method of claim 36, wherein the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile device to the second level sleep mode when the mobile device is in the first level deep sleep mode.

55.   (original)   The method of claim 36, wherein the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode.

56.   (original)   A mobile device battery power saving system, comprising:

a)   a channel processor for providing a flag signal indicating loss of a system channel;

b)   a deep sleep controller for receiving the flag signal, counting a number of times the system channel is lost within a timeout period, and providing a system lost exit flag for entering a deep sleep mode when the system channel count equals a predetermined number;

Appln. No. PCT/CA03/00309
Prelim. Amdt. dated May 4, 2005

Page 7 of 8

c) a variable setting controller for setting deep sleep mode variables in response to the system lost exit flag and for adjusting the deep sleep mode variables in response to control signals; and,

d) a low power controller for iteratively sampling an RF condition parameter at a time interval defined by the deep sleep mode variables and for providing the control signals to the variable setting controller when the RF condition fails to improve.

57. (original) The mobile device battery power saving system of claim 23, wherein the system channel includes one of a pilot channel and a paging channel.

58. (original) The mobile device battery power saving system of claim 23, wherein the deep sleep mode variables include a timer value for setting the time interval and a loop count value for setting a number of iterations.

59. (original) The mobile device battery power saving system of claim 23, wherein the RF condition parameter includes a signal to noise strength ratio.